OPERATOR'S MANUAL

INCUBATORS

IC-43
IC-63

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1. INSTALLATION

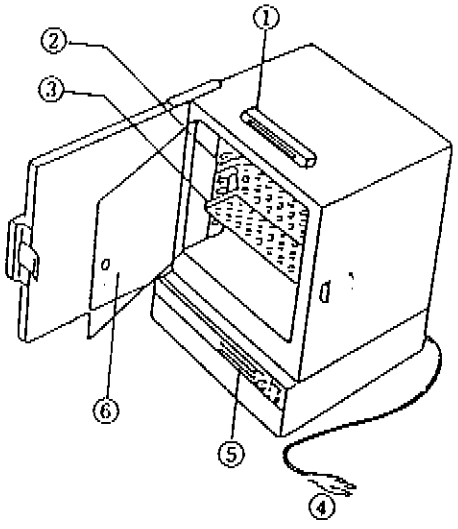
Installation in the following environment should be avoided.

- places subject to extreme temperature changes, such as near an air conditioner
- hot places where the temperature exceeds 35˚C, as such area exposed to direct sunlight
- places where the air contains inflammable gas and corrosive gas
- humid places

2. SPECIFICATIONS

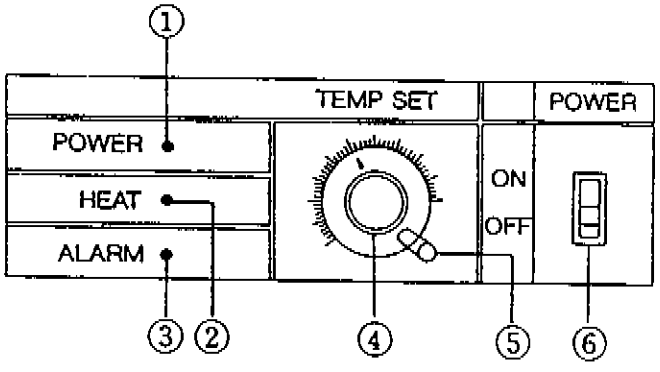
Model		IC-43	IC-63
Operating temp. range		Ambient temperature +5˚C to 60˚C	
Temp. control accuracy		±0.5˚C (at 60˚C)	
Temp. uniformity		±1.0˚C (at 60˚C)	
Temp. controller		PID Control with microprocesser	
Time required to reach max. temp.		Approx. 90 min.	
Sensor		Pt 500 ohm	
Heater capacity		200W	300W
Material	interior	Stainless steel, SUS304	
	exterior	Colled carbon steel sheets, finished with baked melamine resin	
	inner door	Methacrylate sheet	
Insulating material		Polystyrene foam	
Overal dimension	mm	586x578x810	718x678x910
W x D x H	inch	23.1x22.8x31.9	28.3x26.7x35.8
Inside dimension	mm	450x400x400	600x500x500
	inch	17.7x15.7x15.7	23.6x19.7x19.7
Inside capacity	ℓ (cu.ft.)	72 (2.5)	150 (5.3)
Net weight	kg (Lbs.)	Approx.38 (83.8)	Approx.52(114.6)
Power supply 60 Hz		115VAC 2A	115VAC 3A
Max number of shelves that can be inserted		9	12
Space between shelves mm (inch)		35 (1.4)	
Shelf load capacity	kg (Lbs.)	Approx. 15 (33.1)/shelf	
Accessories (included)			
Shelf (Hole type-SUS304)		2 pcs.	3 pcs.
Shelf bracket (SUS304)		4 pcs.	6 pcs.

3. EXTERNAL VIEW



(1) Thermometer
(2) Shelf bracket
(3) Shelf (hole type)
(4) Power supply plug
(5) Temperature controller
(6) Plexiglass door

4. CONTROL PANEL



(1) Power lamp	lights when power switch is turned on.
(2) Heater lamp	lights when incubator is heating.
(3) ALARM lamp	lights when something has malfunctioned.
(4) Temperatue settng knob	Knob for setting desired temperature.
(5) LOCK knob	Knob for protecting mishandling of temperature setting knob.
(6) Power switch	Switch for starting operation of incubator.

5. OPERATION

(1) Turn the power switch (6) on.
(2) Set the indicator mark ▲ to the desired temperature by turning the knob (4). The heater lamp (2) lights and the chamber temperature begins to rise.
(3) Fix the temperature setting knob (4) by turning the LOCK knob (5) clockwise. This prevents accidental movement of temperature setting.
(4) When chamber temperature stabilizes, turn the LOCK knob (5). You may counterclockwise and loosen the temperature setting knob (4), then make fine adjustment of the temperature setting knob (4) setting the mark ▲ by the thermometer indication, to correlate the thermometer read out.

6. ALARM INDICATION

If ALARM lamp lights, the following should be verified.
(1) In case of setting temperature in excess of operating temperature range: Lower set temperature.
(2) If chamber temperature continues to rise heater has been turned off:
NOTE: ALARM may activate under the following conditions:
- Opening the door during in which cooler air triggers the sensor to call for additional heat.
- Setting a lower temperature before letting the unit cool.

If any of these conditions occur turn power switch off (located on front panel) and then front on again.
(3) If there's a defective temperature sensor: Request a repair.

7. CAUTIONS IN OPERATION

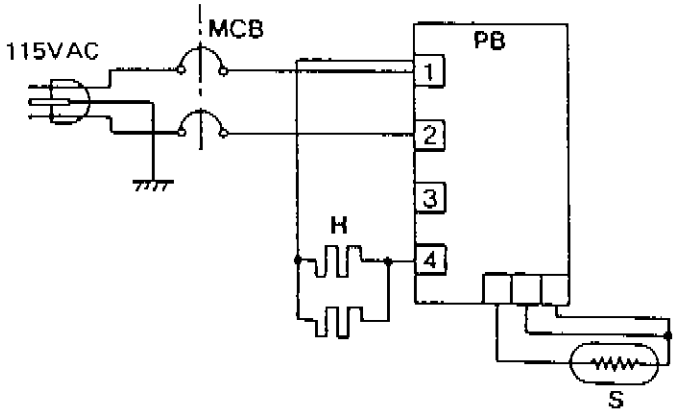
(1) This incubator should be operated between ambient temperature +5°C and 60°C. If you turn temperature setting knob over its maximum operating temperature, ALARM lamp lights and incubator will stop operation.
(2) Alarm may activate under the following conditions:
- Opening the door during operation in which cooler air triggers the sensor to call for additional heat.
- Setting a lower temperature before letting the unit cool.

If any of these conditions occur, turn power switch off (located on front panel) and then front on again.
(3) This incubator is not explosion-proof. Do not use flammable samples, or those with flammable vapor.
(4) Specified shelf load of 15Kg (33.1 Lbs) assumes equally distributed loads. Always distribute samples evenly over shelf area.
(5) Always keep 30% or more open space over shelf area for uniform distribution of temperature.
(6) Insure instrument is plugged into grounded outlet.

8. ACCESSORY LISTING

MFG. P/M	DESCRIPTION	PACKAGING
DK-43-902	SHELF HOLE TYPE FOR IC-43	1/EA
DN-42-009	SHELF BRACKET FOR IC-43	2/pkg
IC-43-901	METAL STACKING KIT FOR IC-43	1/EA
DK-43-904	STAND FOR IC-43/63	1/EA
DK-43-903	VITON GASKET FOR IC-43	1/EA
DN-63-903	SHELF HOLE TYPE FOR IC-63	1/EA
DN-62-009	SHELF BRACKET FOR IC-63	2/pkg
IC-63-901	METAL STACKING KIT FOR IC-63	1/EA
DK-63-902	VITON GASKET FOR IC-63	1/EA

9. WIRING DIAGRAM AND REPLACEMENT PARTS LISTING



MCB : Power switch
H : Heater
PB : Thermoregulator
S : Sensor (Pt 500 ohm)

FOR MODEL IC-43

Symbol	Part Name	Part #	Specifications
MCB	CIRCUIT BREAKER	IS-41-3061	
H	Heater	IC-43-004	
PB	Thermoregulator	IC-43-001	
S	Temperature sensor	IC-43-002	Pt 500
	Door gasket	DK-43-004	Silicone rubber
	COMPLETE INNER DOOR	IC-43-005	

FOR MODEL IC-63

Symbol	Part Name	Part #	Specifications
MCB	CIRCUIT BREAKER	IS-41-3061	
H	Heater	IC-63002	
PB	Thermoregulator	IC-43-001	
S	Temperature sensor	IC-43-002	PT 500
	Door Gasket	DK-63-003	Silicone rubber
	COMPLETE INNER DOOR	IC-63-003	